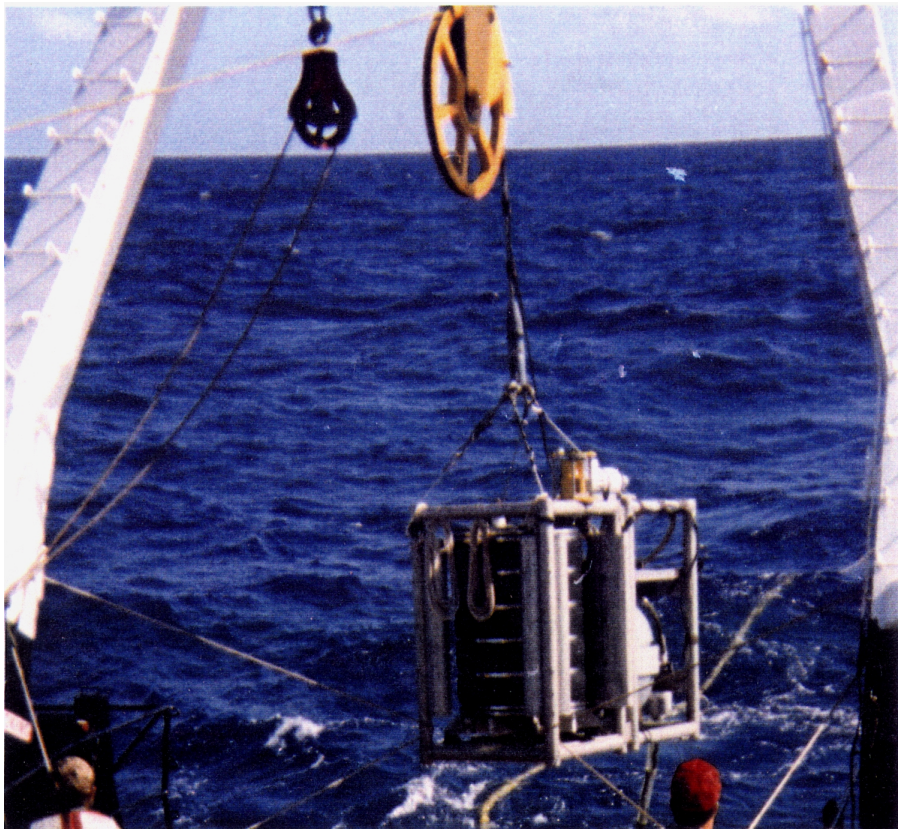
DEEP-TOWED ACOUSTICS/ GEOPHYSICS SYSTEM



This multichannel seismic system, known as DTAGS, is towed by a ship to obtain seismic data from the ocean bottom and subbottom. The array has two 24-channel subarrays—one subarray has hydrophone group spacings of 2.1 m; the second has spacings of 21 m. All groups are composed of six hydrophones with an overall group length of 1.8 m. The larger seismic subarray provides the length required to resolve compressional velocities within sediments. The source/receiver can be towed to full ocean depths (6 km) to achieve the geometry required to resolve the fine-scale structure of deep and midocean sediments. The source is 250 to 650 Hz.

All channels record simultaneously via telemetry to the tow ship. Both geoacoustic backscatter and seismic studies can be done without retrieving the system. The seismic and acoustic data gathered can be processed rapidly with an at-sea processing system. The computers are networked to enhance pseudo real-time data monitoring.

Applications of the systems include:

- Geotechnical studies for placing deep ocean drill rigs and towers
- Seabed waste disposal
- Natural hazard studies.

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